



PATENT APPLICATION
PO-7925
MD-02-52

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION OF)
ROBERT L. CLINE ET AL) GROUP NO.: 1794
SERIAL NUMBER: 10/675,536) EXAMINER: C.D. SAYALA
FILED: SEPTEMBER 30, 2003)
TITLE: SLOW RELEASE)
POLYURETHANE(UREA))
ENCAPSULATED FERTILIZER)

REPLY BRIEF

This Reply Brief is in response to the Examiner's Answer dated November 28, 2007.

Appellants wish to clarify Paragraph 3 on page 7 of their Appeal Brief. It is noted that the Examiner has stated that the logic of this statement is not clearly understood.

It is respectfully submitted that the purpose of the Wynnyk et al reference is to form a protective coating surrounding the particulate plant nutrient in which the protective coating is a substantially homogeneous layer. See Paragraphs [0018], [0030] and [0034] of the Wynnyk et al reference. By comparison, the purpose of the Moore reference, is to form attrition-resistant, controlled release fertilizer particle

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January 28, 2008

Date

which comprises three different layers. The first layer is an inner water-soluble central mass of plant food, the second layer is a base coating of a coupling agents which surrounds and chemically bonds to the water-soluble central mass, and the third layer is a water-insoluble sealing coating formed on top of the base coating and is chemically bonded to the base coating. This water-insoluble sealing layer is a sealing layer which provides a barrier to moisture penetration and the release of the soluble fertilizer from the central mass. See column 2, lines 48-65 and column 3, lines 6-15 of the Moore et al reference. It is also possible that an additional water-insoluble coating layers surround the sealing layer (see column 5, lines 42-46).

Since the purpose of the Wynnyk et al reference is to form a homogeneous layer (or multiple homogeneous layers) and the intent of the Moore reference is to form two different coatings on top of the plant nutrient, it is unclear why one skilled in the art would be motivated to combine these references. Appellants further note that the Moore reference discloses that the diluent fillers (which are finely divided powdered) may be applied between the base coat and the sealing layer, between the sealing layer and the water-insoluble coating layer, and between layers of water-insoluble coatings. See column 8, lines 23-35. Thus, there may be additional layers present in the coated fertilizers or plant nutrients of the Moore et al reference.

Furthermore, Appellants maintain their position that contrary to the disclosure of the Wynnyk et al reference, it is not possible to combine the various components in virtually any manner desired and apply to the plant nutrient material when using the presently required isocyanate-reactive components. As illustrated by Examples 7, 11, 13 and 15 of the present application, a mixture of an isocyanate-reactive component as required by Appellants' claims with an inert inorganic filler forms a thick paste which can not be applied to fertilizer particles. Accordingly, one can not simply combine the various components required by the presently claimed invention in any manner, including the preferred manner as exemplified by the Wynnyk et al reference (see Examples 3-6 therein), and form the presently claimed encapsulated slow release fertilizer particles.

In view of the above, Appellants maintain their position as set forth in their Appeal Brief that the rejection under 35 U.S.C. § 103(a) of Claims 1-5, 7-11, 13-17, 19-23, 25-29 and 31-35 over the Wynnyk et al reference in view of the Moore reference is in error. It is respectfully requested that the rejection be reversed and Claims 1-5, 7-11, 13-17, 19-23, 25-29 and 31-35 be allowed.

Respectfully submitted,

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